

Annual Report

ON

THE HEALTH

OF THE

BOROUGH OF DEAL,

FOR THE YEAR

1909,



BY

ALFRED MASON,

Medical Officer of Health.

T. F. PAIN & SONS, DEAL & SANDWICH.

*To The Worshipful the Mayor, Aldermen and
Councillors of the Borough of Deal, being the
Urban District Council for the said Borough.*

MY LORD AND GENTLEMEN,—

I beg to hand you the Annual Report of the Medical Officer of Health for the year ended December 31st, 1909, dealing with the sanitary condition of the Borough, and containing a summary of the Vital Statistics as required by the Local Government Board.

Population and Area.

In estimating the population, I have adopted the method of previous years, namely, by taking the average annual increase in accordance with the census of 1891 and 1901. According to the census taken in April, 1891, the population was estimated as 8,891, and according to the census of 1901, 10,581; we thus get an intercensal increase in population of 1,690, or an average annual increase in population of 169. Assuming this increase to be constant, the estimated population in April, 1909, becomes 11,933, and in July, the mid-period of the year, which is taken for statistical purposes, 11,975.

The area of the Borough is 1,158 acres, giving a density of population of just over 10 persons per acre.

The total number of inhabited houses at the last census was 2,342, making an average of just over 5 persons per house.

Births.

The total number of Births registered as occurring within the Borough, during the year, was 243, of which number 103 were males and 140 females. This number is below the average for the years 1899—1908, which is 262. The birth-rate for the year is 20.2 per thousand of the population, as against a rate of 21.5 per thousand for the year 1908. It will be seen from Table I., at the end of this report, that the birth-rate is steadily on the decrease, and very much below the average for the previous ten years, which is 23.7 per thousand. The total number of illegitimate births was 21. The natural increase in population by births in excess of deaths was 108.

Deaths.

The total number of Deaths at all ages, registered as occurring within the Borough, during the year, was 140. This number includes both Residents and Non-Residents. In preparing my Report, I have included among the non-Residents, visitors to our Borough and persons brought into the District on account of sickness or infirmity and dying in Public Institutions within the District; whilst among the Residents I have included those permanently residing within the Borough, and persons who, having originally lived in the District, have, through sickness or other misfortune, been removed to Public Institutions without the District. The Public Institutions within the District are the Victoria Cottage Hospital, the Royal Marine Infirmary, and the Deal and Walmer Isolation Hospital; while those without the District are Eastry Union and Chartham Asylum.

The net number of deaths, arrived at by eliminating the non-Residents and adding the number of deaths of former Residents who have died in Public Institutions without the District, was 135, which gives a death-

rate of 11.2 per thousand for the year. This rate is exceedingly satisfactory, and considerably lower than any individual rate or the average rate during the years 1899—1908, which was 14.9 per thousand.

The total number of deaths occurring in Public Institutions within the District was 17, of which number 9 were non-Residents.

On Table IV., at the end of this Report, will be found classified the causes of, ages at, and number of deaths from each disease. From this Table it will be seen that 13 deaths occurred of persons under one year of age, 6 between 1 and 5 years, 1 between 5 and 15 years, 7 between 15 and 25 years, 48 between 25 and 65 years, and 60 between 65 years of age and upwards, whilst, of the latter number, 22 were certified as dying of senile decay. Two deaths occurred from misadventure, whilst none were the result of violence.

The Infantile Mortality rate refers to the ratio per thousand births of children dying under the age of one year. There were 243 births registered during the year, and 13 deaths of children under one year of age; the Infantile Mortality was therefore at the rate of 53 per thousand births registered. The causes of, and ages at, deaths of Infants in weeks and months will be found tabulated on Table V. at the end of this Report. A glance at this Table shows our Infantile Mortality to be free from causes which are generally due to bad sanitation, which I consider extremely satisfactory.

The total number of deaths at all ages from the seven principal epidemic diseases, viz., Smallpox, Measles, Whooping Cough, Scarlet Fever, Diphtheria, Typhoid or Enteric Fever and Diarrhœa, was 2, of which number the certified causes of death were: Measles 1, and Enteric Fever 1. The Zymotic Death-rate refers to the rate per thousand of the population of deaths from these

seven epidemic diseases, and is the extremely low one of .16 per thousand.

Infectious Diseases.

During the year I have received 16 Notifications of Infectious Diseases, the following diseases being notifiable in this Borough, viz., Cholera, Smallpox, Membranous Croup, Diphtheria, Erysipelas, Scarlet Fever, Typhoid Fever, and Puerperal Fever. The cases notified were distributed as follows : Scarlet Fever, 7 ; Erysipelas, 5 ; Typhoid Fever, 3 ; Diphtheria, 1. I consider these figures satisfactory, and the Borough may be said to have been free from any very appreciable amount of Infectious Disease during the year. The almost complete absence of Typhoid Fever is the salient point in this section of my Report, and I attribute it to the fact that the inhabitants have at last become aware of the grave danger of eating cockles in a raw or half-cooked state. I ascertain, on enquiry, that the quantity of cockles sold in the Borough during the year has been very small in comparison with former years.

As usual, numerous notices have been posted in the Borough, cautioning people against the consumption of cockles. As regards the cases of Scarlet Fever, two of the number occurred in one family, and two cases were contracted outside the Borough ; in none of the cases could any very definite or common source of infection be traced. In my last Report I drew attention to the want of inter-notification between the Military and Borough Medical Officers in this District. I am happy to be able to say this matter has been arranged, and should, in my estimation, prove of great service to both parties concerned. In this connection I would also like to draw attention to the value I attach to the weekly returns sent to every Medical Officer of Health in the county by the County Medical Officer, Dr. Howarth, showing the

number of cases of each Infectious Disease in the separate districts of the County.

Water Supply.

The Water-works are situated on the hill between Upper Deal and Walmer, and are the property of the two towns. The undertaking is managed by a Joint Board, composed of the members of the District Councils of Deal and Walmer.

The water is obtained from adits in the chalk, is pumped into a covered reservoir, from which a constant supply gravitates to the various parts of the District. It is of excellent quality. Its only fault, which it shares with all waters derived from a similar source, is its hardness, a good deal of which may be removed by boiling.

Samples are submitted periodically to chemical and bacteriological analysis, the last reports of which are as follows :—

(COPY).

THE CLINICAL RESEARCH ASSOCIATION, LTD.

Watergate House,

Adelphi, London, W.C.

7th August, 1909.

To T. Golder, Esq.

The specimen of water, marked Standpipe in South Street, Deal, received here on 3rd August, 1909, has been examined, and I have been instructed to forward the following report thereon :—

RESULTS.

(1)—Chemical :	Grains per gallon.
Total solids (dried at 120° C.)	22.75
Combined Chlorine	2.10
Expressed as Na Cl	3.47
Nitrogen as Nitrates	0.53
Nitrites	Nil.
Saline Ammonia	Nil.
Albuminoid Ammonia	0.0019

Oxygen absorbed in 4 hours at 27° C.	0.006
Total hardness	18.6°
Lead or Copper	Nil.

(2) —Bacteriological :

Average number of organisms producing visible colonies on gelatine plates, incubated at 20—22° C. for 3 days	16 per c.c.
Average number of organisms producing visible colonies on agar plates, incubated at 37.5° C. for 2 days	4 per c.c.
B. Coli	not found in 100 c.c.
Streptococci	not found in 30 c.c.
B. Enteritidis Sporogenes ...	not found in 100 c.c.

Conclusions.

These results show the water to be of a satisfactory degree of organic and bacterial purity. Nitrates are by no means high for a chalk derived water, and, except that it is a trifle hard, all the other figures are low.

(Signed) C. H. WELLS,

Secretary of the Association.

Drainage.

The town was, in 1901, provided with a perfect system of water carriage drainage, under the advice of Mr. Baldwin Latham, by means of which the town, Middle Deal, and Upper Deal are all drained. The whole of the sewage of the district is carried by gravitation to a suitable point, where it is raised by pumping into a covered reservoir, capable of holding about 600,000 gallons. The outfall springs from the north-east corner of this reservoir. The outfall-pipe is formed of cast-iron pipes, 27 inches in diameter, and extends into the sea 500 feet from low water mark. The average time the outfall is open for discharge is about an hour on each tide, and it is opened at the exact time of high water, when the outfall is submerged from 18 to 20 feet; during such time there is also a 3 to 5-knot current, which runs in a N.E. direction, a speed which is quite sufficient to carry all evidence of sewage well beyond the course

of the river Stour, whose ebb also acts as a secondary safeguard against its return this side of the Goodwin Sands. The scheme answers well, and the whole of the district is now provided with a perfect system of drainage.

Isolation Hospital.

This Hospital, which was erected in 1901, is the property of the Deal Town Council, and is managed by them. The Hospital is situate on the outskirts of the Borough, about $1\frac{1}{2}$ miles from the town. The corrugated iron building consists of two wards (each holding eight beds), nurse's accommodation for one nurse only, and the usual domestic offices. In my last Report I drew attention to the necessity of providing larger accommodation. Plans have been prepared, presented to your Council and approved by them, whereby the kitchen accommodation will be considerably enlarged, and a brick-built larder will be erected, and also a means of access to the Hospital for tradesmen, so as to prevent tradesmen with their goods approaching the Hospital by the front entrance. The water supply is from the main, the drainage is connected with the main sewer, and the building is in telephonic communication with all subscribers to the National Telephone Company.

The main building is in my opinion satisfactory and suitable for the treatment of any of the notifiable infectious diseases, but only for one kind of disease at a time. Should, however, we be unfortunate enough to have to provide isolation for two different diseases at the same time; your small isolation block would be capable of accommodating one such case. The alterations carried out two years ago, with a view to improving the comfort of the building and to render it more immune from variations of climatic condition, continue to prove satisfactory.

Your Hospital Committee have, during the year,

been fortunate in securing the services of a man and his wife as permanent caretakers, who have so far proved satisfactory in every respect. They came from a similar Institution at Ashford, with excellent testimonials as regards both their general and nursing capabilities. Your Hospital has been occupied during the year for 150 days, during which time nine cases of disease have been treated. It was opened from January 1st to 16th for treatment of three cases of enteric fever which were admitted at the latter end of 1908; from August 16th to 19th for isolation of a suspected case of enteric fever, and from August 28th to September 25th for a case of diphtheria, sent in by the Walmer Authority, and from September 21st to December 31st for the isolation and treatment of scarlet fever.

In my last Report I drew attention to the unsatisfactory state of the shed in which your steam disinfecting apparatus was stationed in the Corporation yard; in August this shed was the site of a fire, which happily was extinguished without damage to the disinfecting apparatus, but the building was completely demolished, and since then an excellent brick and tile building has been substituted.

Physical Features and Climate of the District.

Most of the old town was built on the alluvium shingle and sand prevailing by the shore. The elevations range from 10 to 15 or 20 feet above mean sea level, the higher levels being on the west side of the town. To the south-west there are clay beds, the ground rising as we approach the chalk in Upper Deal, where the Church stands 50 feet; and further southwards to the Waterworks, the altitude is 100 feet above the sea-level. The chalk forms a ridge running from

S.E. to N.W. These conditions are climatically favourable, as they favour evaporation. The relative humidity of the air, as found by actual observation, indicates a fair amount of dryness. The ozone is above an average, often reaching the maximum. These last two factors, taken in conjunction with a good sunshine record, are scientifically known to be inimical to the germs which cause consumption, and consequently our climate may be said to be bracing, and suitable for the treatment of chronic or incipient cases of a tuberculous nature. My Annual Report is supposed, where possible, to include statistics of the year's meteorological observations; were it not for the privilege I have had of reading the valuable report presented to your Council by our eminent meteorologist, Mr. Samuel Miller, I should be unable to comply with this request, and so I take this opportunity of publicly expressing my thanks to him for the following data :

AIR TEMPERATURE.—The mean temperature of the air for the whole year was 49.1° , or one degree lower than that for 1908, while the same reading recorded at Greenwich Royal Observatory gives an average for the last 65 years of 49.5° . The greatest cold experienced in the year was in the month of March, and the lowest reading for the year was that of 18° on March 5th, while the highest reading was that of 82.2° on August 12th. The mean temperature, taken at 9 p.m., during our summer months, was June 53° , July 57.5° , August 59° , September 55° , and October 52.6° .

SEA TEMPERATURE.—This is of great interest to our residents and visitors who avail themselves of our excellent sea-bathing; the daily readings, taken at 9 a.m., may be seen posted every morning in a suitable case at the foot of the Pier. The year's readings show that the month of March were lower than any for four years, the lowest reading being that of 35.4° on March

15th. The sea's temperature did not once rise to 60° till July 18th, whilst the maximum temperature was that of 64.3° on August 16th.

SUNSHINE.—We enjoyed 1,845 hours of sunshine, or 75 hours more than in 1908. The month of March was the most deficient, whilst the month of May shows 330 hours. One of the defects of our summer months was the deficiency of heat rays, as our solar radiation readings were only 50° in May, 44° in June, 45° in July, and 52.8° in August.

RAINFALL.—Rain gauges are read daily at the lowest level in South Deal, and at the highest level, namely, the Waterworks. The total fall for the year was : South Deal, 30.87 inches, and at the Waterworks, 29.28 inches. Rain fell on 182 days ; the highest monthly reading was October, which showed nearly 8 inches during the month, whilst the lowest monthly readings were January and November, which showed only 13 hours in each month. The heaviest day's rainfall was that of $2\frac{1}{2}$ inches on October 28th.

OZONE.—Taking the maximum ozone as expressed by the figure ten, the highest monthly average was that of 7.1 in July, whilst the lowest monthly averages were those of February, 3.9, and November, 3.7, the remaining months varying between 6 and 6.7, which is very good indeed.

Sanitary Inspector's Department.

The cowsheds, dairies and milk-shops have been carefully inspected, and cases of defects, where found, remedied ; the common lodging-houses and slaughter-houses have also been regularly inspected. Many sanitary authorities have in recent years made arrangements for the periodic examination of cows by a qualified veterinary surgeon, with a view to assisting the prevention of spread of tuberculosis by infected milk. This movement

is, in my opinion, an excellent one, and worthy of consideration.

Patent covered carts are used for the removal of house refuse, which is regularly collected by the town staff, under the supervision of the Borough Surveyor. This refuse is carted to a field well removed from any houses, and is sold to farmers for manuring the land. I would once again impress on all householders the necessity of, where practicable, burning refuse (particularly decaying vegetable matter), and preventing the contents of dustbins from becoming moist. It is not at all uncommon for the dustbin to contain a considerable amount of liquid material, which renders the contents very offensive in the warmer weather, and thus causing the dust carts to emit obnoxious smells into the street every time the lid is removed to empty refuse into the cart.

The systematic inspection of the town has been continued all through the year, and a very large number of meetings of your Sanitary Committee have taken place to receive, and deal with, reports on the inspections made. Nearly 300 premises were inspected, and reports made on the same to the Sanitary Committee. Many inspections were also made on premises as the result of complaints or otherwise, which are not included in the systematic inspection. Some idea of the nature of the defects found will be gathered from the following list of orders sent to remedy defects :

- 77 houses had long hopper closets, which were either dirty, broken, or without flushing apparatus.
- 4 houses had defective pail closets.
- 60 houses had no means of ventilation to the drains.
- 21 houses had defective yard pavings.
- 13 premises were drained into cesspools.
- 3 houses had closet metal soil pipes on internal walls.
- 5 houses had defective sink wastes.
- 12 houses had defective bell traps.
- 2 houses had very bad and insanitary floors.

- 7 premises had defective closet pans of different forms to the long hoppers.
- 8 houses were found in a very dirty condition.
- 4 premises had defective roofs.
- 1 house had defective walls.
- 28 premises had other forms of defect not enumerated above.

Factory and Workshops Act.

As required by this Act, the factories, workshops, work-places, and home-workers' premises, situate within the District, have been inspected by the Sanitary Officers, and any defects found dealt with. From the Table, at the end of this Report, dealing with this matter, it will be seen that 26 Factories, 48 Workshops, and 34 Work-places were inspected, and defects were found in 8 cases, in all of which notices were sent to remedy such defects. During the year 11 Males and 9 Females, between 14 and 16 years of age, were examined for certificates of fitness for employment, and all were certified as fit for employment. Four cases of accident have been reported to me, and duly investigated; in each case the accidents and results were of a slight nature.

In concluding my Report, I would again take this opportunity of expressing my thanks for the valuable assistance and courtesy extended to me during the year by my fellow practitioners, the Town Clerk, the Borough Surveyor, and Mr. Samuel Miller. The usual Schedules of Vital Statistics, which are required by the Local Government Board, will be found at the end of this Report.

I am, my Lord and Gentlemen,

Your obedient servant,

ALFRED MASON,

Medical Officer of Health.

Deal, February 23rd, 1910.

I. INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (Including Factory Laundries)	26		
Workshops (Including Workshop Laundries)	48	8	
Workplaces (Other than Outworkers' premises included in Part 3 of this Report)	34		
Total	108	8	

2. DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts :—</i>				
Want of cleanliness				
Want of ventilation				
Overcrowding				
Want of drainage of floors				
Other nuisances	8	8		
Sanitary accommodation { insufficient unsuitable or defective not separate for sexes				
Total	8	8		

3. HOME WORK.

Nature of Work.	Outworkers' Lists, Section 107.		Inspection of Outworkers' Premises.	Outwork in Unwholesome Premises, Section 108.		
	Addresses of Outworkers.			Instances.	Notices served.	Prosecutions.
	Received from other Councils.					
Wearing Apparel :— (1) making, &c. (2) cleaning and washing	49	49	49	8	8	Nil.

4. REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.				Number.
Workshop Bakehouses	..	..	..	22
Workshop Laundries ..	..	..	..	3
Carpenters', etc., Workshops	..	..	..	6
Dressmakers', etc., Workshops	..	..	..	8
Total number of Workshops on Register ..				39

5. OTHER MATTERS.

Nil.

TABLE I.

Vital Statistics of Whole District during 1909 and previous Years.

YEAR.	Popula- tion estimated to Middle of each Year.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				TOTAL DEATHS IN PUBLIC INSTITU- TIONS IN THE DISTRICT. 9	Deaths of Non- Residents registered in Public Institu- tions in the District. 10	Deaths of Residents registered in Public Institu- tions beyond the District. 11	NETT DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
		Number	Rate*	At all Ages.		Number.	Rate.*					
				Under 1 year of age.								
				Number	Rate per 1,000 Births registered. 6						Number	Rate*
1	2	3	4	5	6	7	8	9	10	11	12	13
1899.	10,285	249	24.2	29	116	162	15.7	9	9	10	163	15.7
1900.	10,454	244	23.3	28	114	162	15.5	12	13	17	166	15.8
1901.	10,623	250	23.5	39	140	173	16.3	23	20	12	165	15.5
1902.	10,792	283	26.2	22	77	167	15.4	17	17	11	161	14.9
1903.	10,961	256	23.3	24	93	154	14	22	20	15	149	13.5
1904.	11,130	273	24.5	28	102	174	15.6	22	16	20	178	15.9
1905.	11,299	290	25.6	37	127	180	15.9	12	6	17	185	16.3
1906.	11,468	261	22.9	44	168	178	15.8	12	12	16	182	15.8
1907.	11,637	265	22.7	26	97	156	13.4	10	9	13	160	13.8
1908.	11,807	254	21.5	17	67	153	12.8	13	12	5	145	12.2
Averages for years 1899-1908.	11,045	262	23.7	28	110	165	15	14	13	13	165	14.9
1909.	11,975	243	20.2	13	53	140	11.7	17	9	12	135	11.2

* Rates in Columns 4, 8 and 13 should be calculated per 1,000 of the estimated gross population.

NOTE.—The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institu- tions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums. A list of the Institutions in respect of the details in which corrections have been made should be given on the back of this Table.

Area of District in acres
(exclusive of area
covered by water.) } 1,158.

Total population at all ages 10,581 } At Census
Number of inhabited houses.. .. . 2,342 } of
Average number of persons per house 4.5 } 1901.

I.	II.	III.
Institutions within the District receiving sick and infirm persons from outside the District.	Institutions outside the District receiving sick and infirm persons from the District.	Other Institutions, the deaths in which have been distributed among the several localities in the District.
Victoria Hospital ... Isolation Hospital... Royal Marine Infirmery	Chartham Asylum... Eastry Union	
Is the Union Workhouse within the District ?		No.

TABLE 3.
Cases of Infectious Disease notified during
the Year 1909.

NOTIFIABLE DISEASE.	Cases Notified in Whole District.						No. of Cases Removed to Hospital.
	At all ages.	At Ages -Years.					
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.		65 and upwards.
Small-pox							
Cholera							
Diphtheria (including Membranous croup)	1		1				
Erysipelas	5				3	2	
Scarlet fever	7		3	3		1	5
Typhus fever							
Enteric fever	3		1		1	1	
Relapsing fever ...							
Continued fever ...							
Puerperal fever ...							
Plague							
Totals	16		5	3	4	4	5

Isolation Hospital :

DEAL AND WALMER ISOLATION HOSPITAL, DEAL.

Total available beds, 17. Number of Diseases that can be concurrently treated, 2.

TABLE 4.

Causes of, and Ages at, Death during Year 1909.

CAUSES OF DEATH.	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.							Total Deaths whether of "Residents" or "non- Residents" in Public Institu- tions in the District.
	All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	
Small pox								
Measles	1	1						
Scarlet fever								
Whooping-cough								
Diphtheria (including Membranous croup) ...								1
Croup								
Fever { Typhus								
Enteric	1				1			
Other continued ...								
Epidemic influenza								
Cholera								
Plague								
Diarrhœa	2	2						
Enteritis								
Gastritis	1	1						
Puerperal fever								
Erysipelas								
Phthisis (Pulmonary Tuberculosis)	6				3	3		
Other tuberculous diseases...	8		1		2	3	2	1
Cancer, malignant disease...	16				1	8	7	2
Bronchitis	6		2			2	2	1
Pneumonia	9	2	2			2	3	2
Pleurisy								
Other diseases of Res- piratory organs	1							
Alcoholism						1		
Cirrhosis of liver	5					2	3	2
Venereal diseases... ..	1	1						
Premature birth	2	2						
Diseases and accidents of Parturition								
Heart diseases	19			1		8	10	1
Accidents	2					1	1	1
Suicides								
Senile decay	22						22	
All other causes	33	4	1			18	10	
All causes	135	13	6	1	7	48	60	11

TABLE 5.

Infantile Mortality during the Year 1909.

Deaths from stated Causes in Weeks & Months under One Year of Age.

CAUSE OF DEATH.	Under 1 week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes.																	
Common Infectious Diseases.													1				1
Diarrhoeal Diseases.						1					1						2
Wasting Diseases.	2						1										1
Tuberculous Diseases.						1	1			1							3
Other Causes.	1					1				1						1	2
																	1
	3					3	2			2	1		1			1	13

Births in the year : Legitimate, 222 ; illegitimate, 21,

Deaths from all Causes at all Ages, 135. Population, estimated to middle of 1909, 11,975.

